

ABSTRACT

An air flow control device, such as an air diffuser (21) with a differential pressure sensing assembly. The diffuser (21) has a housing (29) formed for mounting to a supply air conduit (22) for discharge of supply air (54) into a room (56). The differential pressure sensing assembly includes a diffuser-mounted portion (41) and a detachable sensor portion (40). The diffuser mounted portion (41) is provided by a pressure tube (42) having at least one opening (43) therein mounted to the housing (29) with the opening (43) positioned proximate an area of known cross section to communicate pressure at the opening (43) to an open distal end (46) of the tube (42). The distal end (46) is secured in a position accessible from a room side (51) of the housing (29). The distal end (46) of the tube (42) is formed for releasable coupling of the detachable sensor portion (40) of the differential pressure sensing assembly thereto, and the sensor portion includes a differential pressure measurement device (61) for measurement of the difference between the supply air pressure in the diffuser (21) at the known area and the ambient room air pressure. This measurement is made from a room side (51) of the housing (29) and allows a determination of the supply air flow rate through the diffuser to be made. A method of measuring air flow rate in an air flow control device (21) is also disclosed.